WEST Search History

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DATE: Friday, September 03, 2004

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ	
☐	L7	L5 and color near5 (assign$5 or register or control$4)same (lumin$9 or brightness)	4
☐	L6	L5 and color near5 (assign$5 or register or control$4)	7
☐	L5	source adj2 data near10 output near6 (device or print$4 or display$4)and (color$1 near5 (print$5 and (lumin$9 or brightness)))	13
☐	L4	source adj2 data near10 output near6 (device or print$4 or display$4)and (color$1 near5 print$5 and (lumin$9 or brightness))	17
☐	L3	source adj2 data near10 output near6 (device or print$4 or display$4)same (color$1 near5 print$5 and (lumin$9 or brightness))	0
☐	L2	source adj2 data near10 output near6 (device or print$4 or display$4)	552
☐	L1	source adj2 data near10 output near6 (device or print$4 or display$4)	552

END OF SEARCH HISTORY

h e b b cg b chh e f f f c e b c

L Number	Hits	Search Text	DB	Time stamp
1	85857	print$5 near4 color$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/09/03 13:09
2	4424	print$5 near4 color$1 and color$1 near5 (brightness or lumin$9)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/09/03 13:10
5	0	print$5 near4 color$1 and color$1 near5 (brightness or lumin$9)near5 (level$1 and weight$4) same (half adj2 ton$4 or (grey or gray) adj2 scal$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/09/03 13:12
4	6	print$5 near4 color$1 and color$1 near5 (brightness or lumin$9)near5 (level$1 and weight$4) and (half adj2 ton$4 or (grey or gray) adj2 scal$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/09/03 13:12
3	21	print$5 near4 color$1 and color$1 near5 (brightness or lumin$9)near5 (level$1 and weight$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/09/03 13:28
6	9	print$5 near4 color$1 and color$1 near5 (brightness or lumin$9)near5 (level$1 and weight$4) and luminance and chrominance	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/09/03 13:29
7	9	print$5 near4 color$1 and color$1 near5 (brightness or lumin$9)near5 (level$1 and weight$4) and((brightness or luminance) and chrominance)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/09/03 13:29
8	9	print$5 near4 color$1 and color$1 near5 (brightness or lumin$9)near5 (level$1 and weight$4) and((brightness or luminance) same chrominance)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/09/03 13:29

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End of Result Set

Generate Collection Print

L4: Entry 17 of 17 File: DWPI Jul 11, 2002

DERWENT-ACC-NO: 2002-655746
DERWENT-WEEK: 200340

TITLE: Image data processing system assigns one of the colors available in output device, to each pixel in source data, according to specified luminance level

PRIORITY-DATA: 2001JP-0029749 (February 6, 2001), 2001JP-0000671 (January 5, 2001)

Search Selected Search ALL Clear

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20020089514 A1	July 11, 2002		036	G09G005/02
EP 1223745 A2	July 17, 2002	E	000	H04N001/60
JP 2002269550 A	September 20, 2002		033	G06T001/00
JP 2002288682 A	October 4, 2002		035	G06T011/80
JP 2002314833 A	October 25, 2002		025	H04N001/60
KR 2002057825 A	July 12, 2002		000	G03G015/01
CN 1379584 A	November 13, 2002		000	H04N001/40

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
US20020089514A1	September 7, 2001	2001US-317782P	Provisional
US20020089514A1	September 7, 2001	2001US-317918P	Provisional
US20020089514A1	December 18, 2001	2001US-0026157	
EP 1223745A2	December 7, 2001	2001EP-0129142	
JP2002269550A	December 27, 2001	2001JP-0398520	
JP2002288682A	December 20, 2001	2001JP-0388552	
JP2002314833A	December 20, 2001	2001JP-0388553	
KR2002057825A	January 4, 2002	2002KR-0000423	
CN 1379584A	January 4, 2002	2002CN-0106464	

INT-CL (IPC): B41 J 2/525; B41 J 5/30; B41 J 21/00; G03 G 15/01; G06 T 1/00; G06 T 5/00; G06 T 11/60; G06 T 11/80; G09 G 5/00; G09 G 5/02; H04 N 1/387; H04 N 1/40; H04 N 1/407; H04 N 1/46; H04 N 1/60

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h e b b cg b cc e

L4: Entry 15 of 17 File: USPT May 2, 2000

DOCUMENT-IDENTIFIER: US 6058248 A
TITLE: Computerized method for improving data resolution

Abstract Text (1):
A data resolution synthesis algorithm takes low resolution source input data (e.g., data degraded from compression or data acquired from low quality imaging devices) to synthesize high resolution output data. In an exemplary embodiment for color printing, the algorithm is performed by characterizing a multi-pixel area, or window, around a pixel that can benefit from resolution enhancement. To interpolate to a high resolution output a set of spatial filters is applied to the data area based on the window characterization. The output of the resolution synthesizer is a set of multiple pixels for each input pixel, representing the source input pixel in a higher resolution enhanced version. The filters are chosen from a stored data base (generic or specifically applicable data base for each type input device) created to fit input/output device requirements.

Brief Summary Text (10):
In color printing, such as with laser or ink-jet dot matrix hard copy apparatus, it may be even simply a user preference to create a print with higher resolution than the source provides in order to provide a sharper, less grainy, smoother textured image to present an overall higher quality and artistic print.

Drawing Description Text (9):
FIG. 6 is a color comparison of images printed without and with the application of the present invention as shown in FIGS. 1-5.

Detailed Description Text (5):
FIG. 1A is a depiction of a system 100 implementing the present invention. A data source 102 has an output of low resolution data 104. Before putting the data 104 into an output device 106 (e.g., a color printer) storage apparatus 108 from which an output version 110 of the input data 104 can be generated, the data 104 is analyzed. When the input data 104 is found to be congruent with the processes of the present invention, further analysis, data enhancement, and resolution synthesis steps 112 can be performed. In the process of analysis, other known manner data enhancements can also be employed to conform the output data 114 to the output device 106 data resolution capabilities, such as a variety of user output options provided in a color printer.

Detailed Description Text (12):
If the user has selected 107 BEST print mode output, but the computer has not requested a resolution upscaling 109, a check is made to determine if the source data was already upscaled 111, e.g., the decompressed JPEG file. For example, decompression may have already upscaled the true source data by a factor of two or more via a simple pixel replication routine (see Background of the Invention section, supra). Alternatively, the source may have stretched the data bidimensionally to fit the output device format [e.g., the Internet provider may know that pixel data needs to be upscaled in order to render a 6.times.9-inch print of the current screen display rather than a 2.times.3-inch print on the 8.5.times.11-inch printer paper]. However, the algorithm used by the application to pre-upscale images is likely a simple and less effective prior art technique. Since

a goal of the present invention is to provide superior upscaling to those techniques while providing an output device resolution matched data set, reversal of such a prior upscaling, or downscaling 113, prior to further analysis and resolution synthesis 121 provides superior final image results.

Detailed Description Text (20):
For a two-times ("2.times.") enhancement--viz., two dimensionally from one input pixel to four output pixels--selection 203 (FIG. 2A) of a window 301 (FIG. 3) of 3.times.3 pixels has been found to present an adequate sample of a local region of an image to be enhanced. Note however that a larger window 305 (e.g., 5.times.5 pixels) could be used in the characterization, filtering, or both routines of the present invention. In experimenting specifically for ink-jet printing implementations, it has been found that use of a larger window both for characterizing a target pixel 303 and for filtering a window may not improve the printed image noticeably within the limitations of human visual perception. Selection of too large a window may lead to the printing of undesirable artifacts if the variations of image characterizing factors is great within the selected window. However, such larger windows may be effective in another specific application (see Background section, supra). Similarly, it is possible to select and use a "double window," one for characterization and another for data filtering. In the alternatives shown in FIG. 3, the outer 5.times.5 pixel window 305 of the image that could be subject to filtering is denoted as observation vector z, while inner 3.times.3 pixel window 301 is used to characterize the nature of the target pixel 303. Thus, the process is adaptable to optimization for different input data sources and output data devices.

Detailed Description Text (27):
If the difference is above the threshold 206-208, indicating enhancement is warranted 206', 207', 208", the process continues on a plane-by-plane basis. Next, a check 211-213 is made of imaging characteristic factor variation for the entire window data subset select 203, again to determine if resolution synthesis is warranted. For example, while a target pixel may vary from the surrounding window as determined in steps 206, 207, 208, if the window 301 itself has little overall color variation--e.g., the image of the white of an eye--applying resolution synthesis could be superfluous to the visual appearance of the final output image and so it can be bypassed in order to speed data processing. In the preferred embodiment, a grey scale luminance value is calculated 211 for the target pixel 303 and each pixel in the window 301.

Detailed Description Text (28):
For the current preferred embodiment useful in computer peripheral color printing, it has been found that suitable results are achieved in a reasonable real time calculation by using grayscale values even though manipulating color data of a form comprising tristimulus color space triplets such as {Red, Green, Blue} or {Cyan, Magenta, Yellow}. Each data triplet value is run through the calculations individually as if it represented a grey scale data coordinate. In other words, each color plane data coordinate of a triplet is treated individually as if it were a single luminance value in grey scale:

Detailed Description Text (29):
It will be recognized by a person skilled in the art that a data base using true color space data can be created and used to created tristimulus color space vectors and data filters but at the cost of adding significantly more memory, logic, and data processing time. As a variety of such techniques are already known in the art, use of true color space data rather than grey scale luminance values is not beyond the scope of the present invention, but no further detail is necessary to an understanding of the present invention. Note that selection of grey scale luminance makes the process suitable for true grey scale image enhancement, e.g., for resolution enhancement of black and white photographs.

Detailed Description Text (30):
The changes in luminance (Max L*-Min L*, where L* is the standard nomenclature for luminance), over the target pixel window of pixels 301 is calculated and compared 212 to a predetermined threshold. The difference is compared to a first threshold of a range of luminance values. If it is above the first predetermined threshold, the process proceeds. If not above the first threshold, meaning very little variation in the window 301, another simple known in the art enhancement, e.g., pixel replication, or the like, is applied 209. With the process proceeding, the entire window luminance variation of the window is checked 213 against a second predetermined threshold. In other words, a test is made as to whether the average luminance of a window 301 is within a range of color variation--meaning some but not a great deal of variation. Thus, if the difference 213 is above the lower limit, first threshold, of the range of color variation 212 but below the upper limit, second threshold--meaning subtle color variations within the window--a secondary, improved enhancement such as a asymmetric Laplacian filter is applied 215 to the target pixel. That is, within the luminance check range, resolution synthesis may not been found to be warranted, yet known manner enhancement is desired and therefore applied. If in comparison the window luminance variation exceeds the second threshold 213, the process proceeds.

Detailed Description Text (33):
Turning now to FIGS. 2B and 3, assume a window 301, or at least one color plane of the current pixel 303, is selected for resolution synthesis. For the printing implementation of the exemplary embodiment of the present invention, the target pixel window region 301 is characterized 221, 309. The characterization process is depicted in more detail in FIG. 4. Each axis in the 8-dimensional space L0-L7 has a designated range of 0 to 255. The target pixel LT and eight surrounding pixels L0-L7 were converted to gray scale luminance values; now the central target pixel LT value is subtracted:

Detailed Description Text (35):
Ln=luminance value for surround pixel n,

Detailed Description Text (36):
LT=luminance value for the target pixel, and

Detailed Description Text (37):
Vn=relative luminance values of LT to Ln.

Detailed Description Text (38):
This provides an 8-dimensional vector denoted the cluster vector y (also sometimes referred to hereinafter as a "window key" or "cluster key"), which is a representation of the given pattern, tone independent, of the window data for the entire pixel window 301. In other words, a real time derived cluster vector y contains salient image data for the pixel window 301. Cluster vectors y are assumed to be distributed as a multi-variate Gaussian mixture via this luminance variation value characterization.

Detailed Description Text (46):
In this exemplary embodiment, the provided data base is one hundred and one image resolution data filters (the number of filter classes is constrained only by storage capacity of the particular implementation), each class comprising groups of four data filters that have been generated and classified based upon imagery test data. For the exemplary embodiment, each class is a group of four data filters relating to a luminance grey scale pattern.

Detailed Description Text (66):
Despite the seeming complexity of the new enhanced high resolution image from low resolution image data, it has been found that the data processing time in the efficient resolution synthesis mode is negligible with respect to the average print

time required for a full color print.

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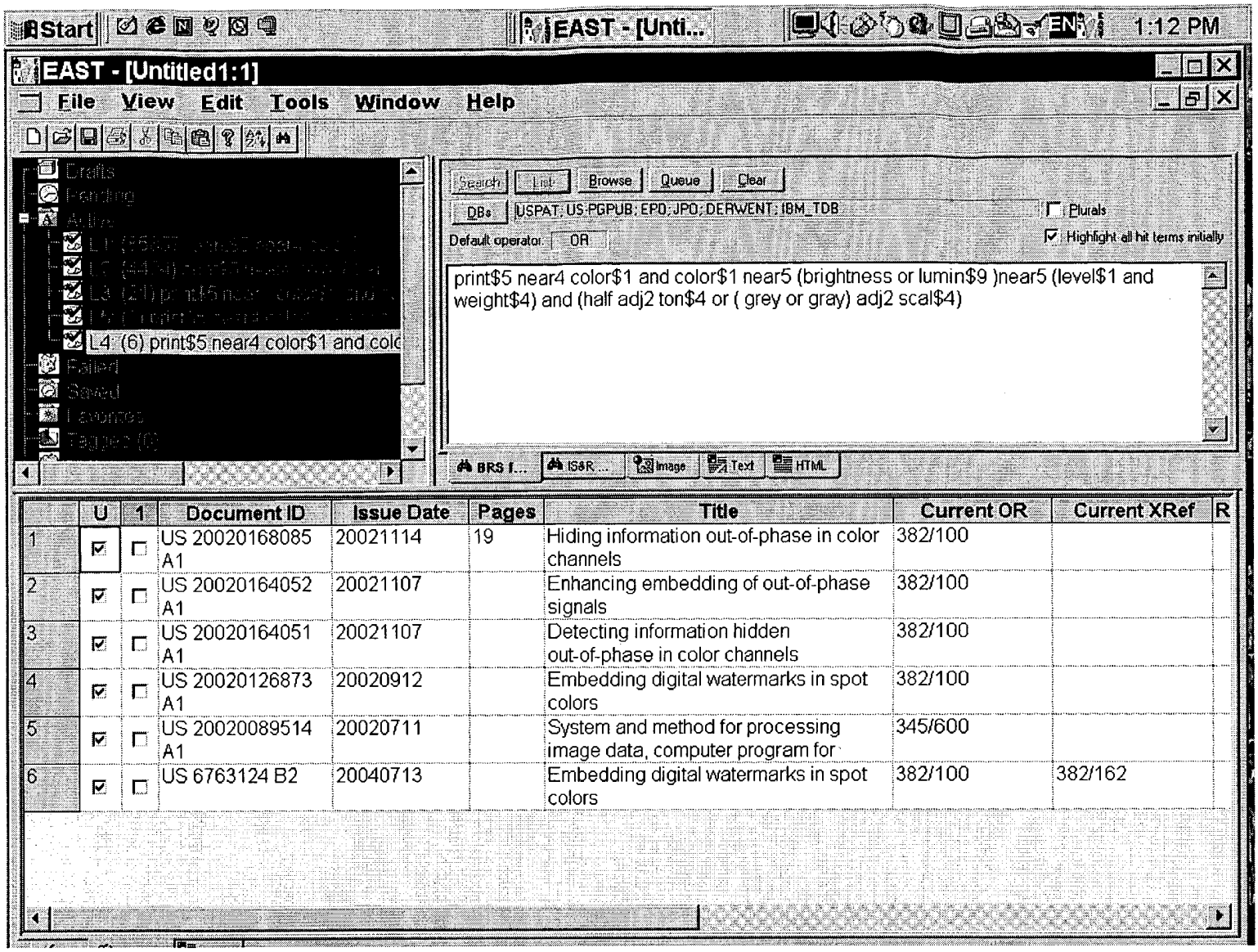

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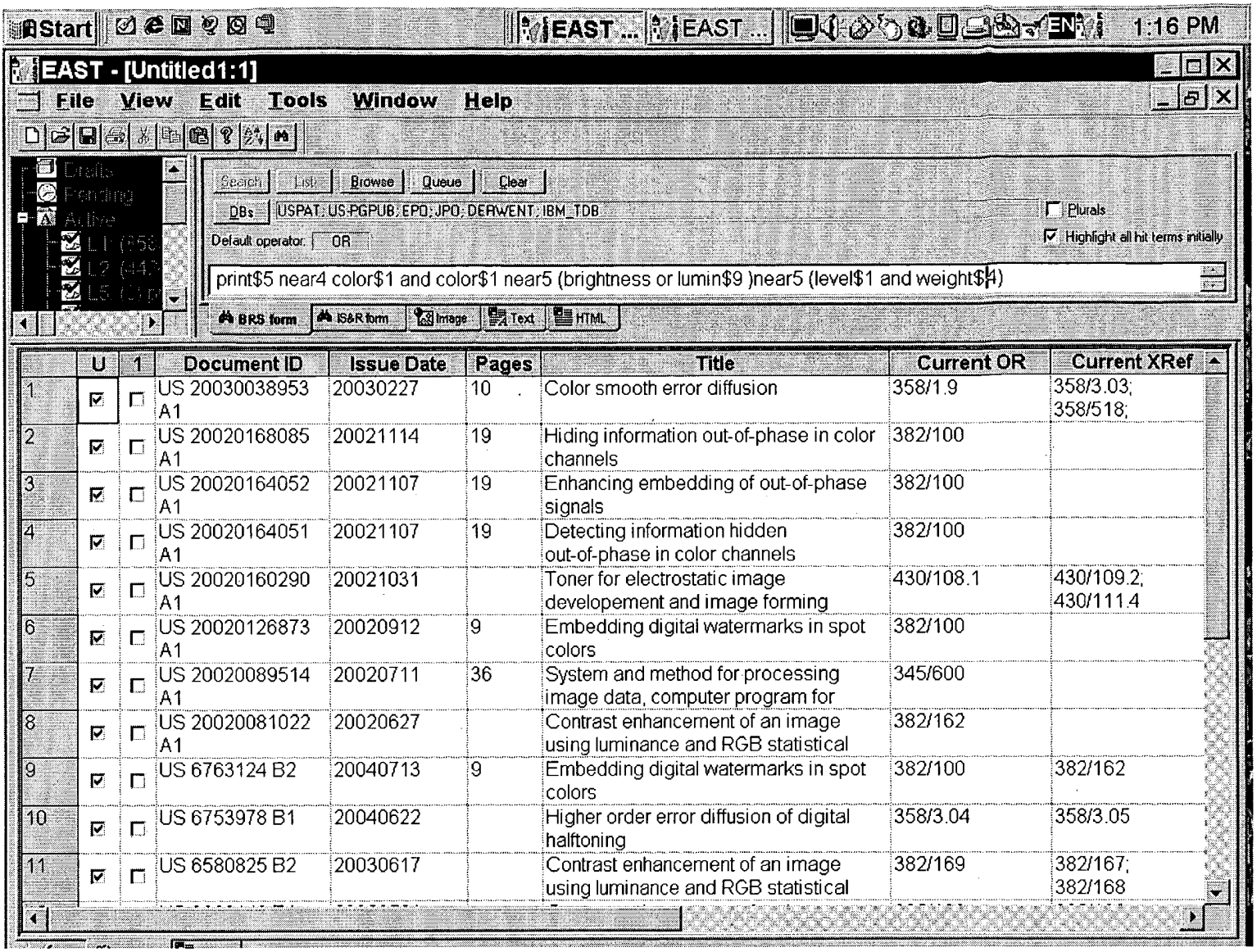
1	☑	☐	US 20020168085 A1	20021114	19	Hiding information out-of-phase in color channels	382/100		
2	☑	☐	US 20020164052 A1	20021107		Enhancing embedding of out-of-phase signals	382/100		
3	☑	☐	US 20020164051 A1	20021107		Detecting information hidden out-of-phase in color channels	382/100		
4	☑	☐	US 20020126873 A1	20020912		Embedding digital watermarks in spot colors	382/100		
5	☑	☐	US 20020089514 A1	20020711		System and method for processing image data, computer program for	345/600		
6	☑	☐	US 6763124 B2	20040713		Embedding digital watermarks in spot colors	382/100	382/162	



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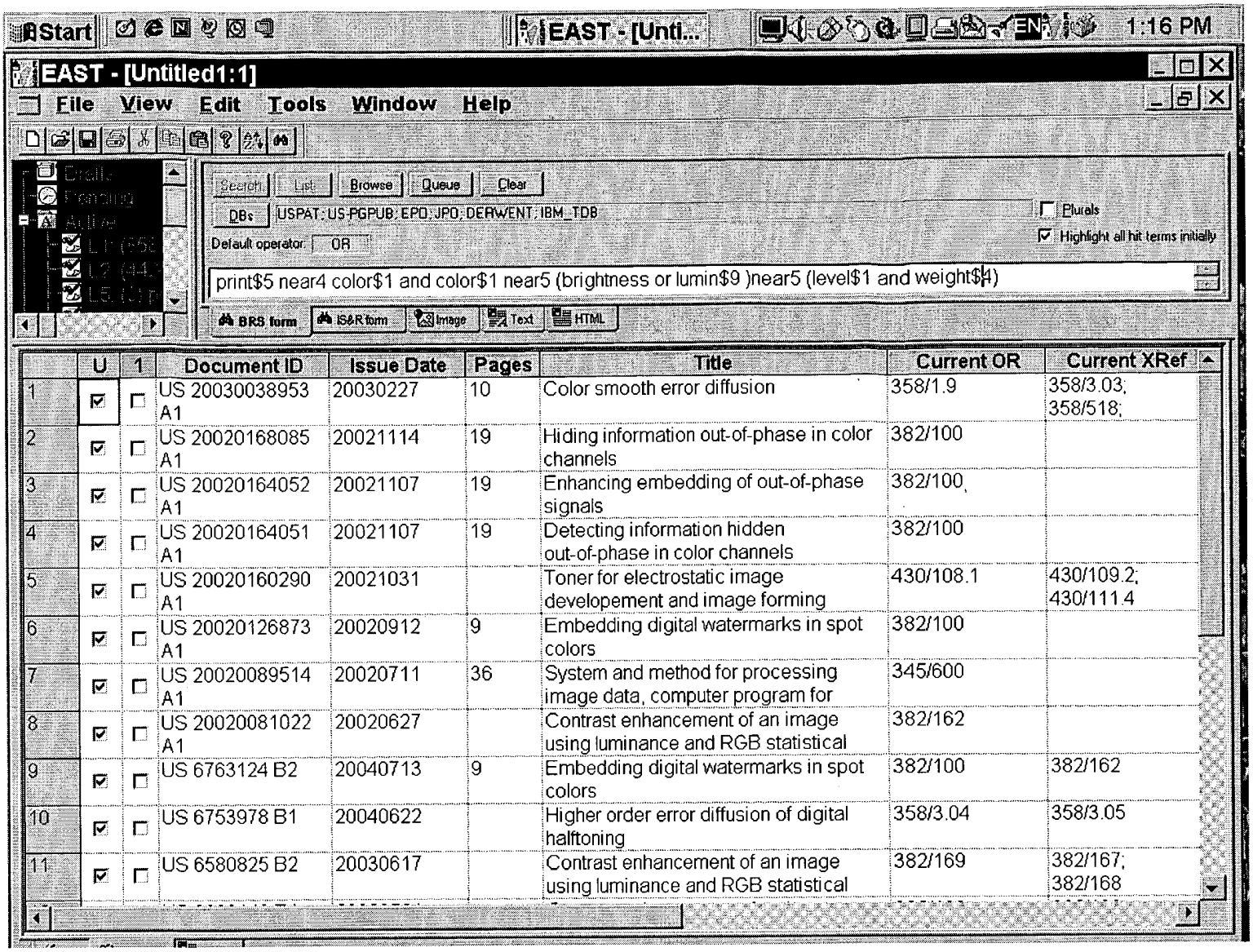
1	☑	☐	US 20030038953 A1	20030227	10	Color smooth error diffusion	358/1.9	358/3.03; 358/518;
2	☑	☐	US 20020168085 A1	20021114	19	Hiding information out-of-phase in color channels	382/100	
3	☑	☐	US 20020164052 A1	20021107	19	Enhancing embedding of out-of-phase signals	382/100	
4	☑	☐	US 20020164051 A1	20021107	19	Detecting information hidden out-of-phase in color channels	382/100	
5	☑	☐	US 20020160290 A1	20021031		Toner for electrostatic image developement and image forming	430/108.1	430/109.2; 430/111.4
6	☑	☐	US 20020126873 A1	20020912	9	Embedding digital watermarks in spot colors	382/100	
7	☑	☐	US 20020089514 A1	20020711	36	System and method for processing image data, computer program for	345/600	
8	☑	☐	US 20020081022 A1	20020627		Contrast enhancement of an image using luminance and RGB statistical	382/162	
9	☑	☐	US 6763124 B2	20040713	9	Embedding digital watermarks in spot colors	382/100	382/162
10	☑	☐	US 6753978 B1	20040622		Higher order error diffusion of digital halftoning	358/3.04	358/3.05
11	☑	☐	US 6580825 B2	20030617		Contrast enhancement of an image using luminance and RGB statistical	382/169	382/167; 382/168



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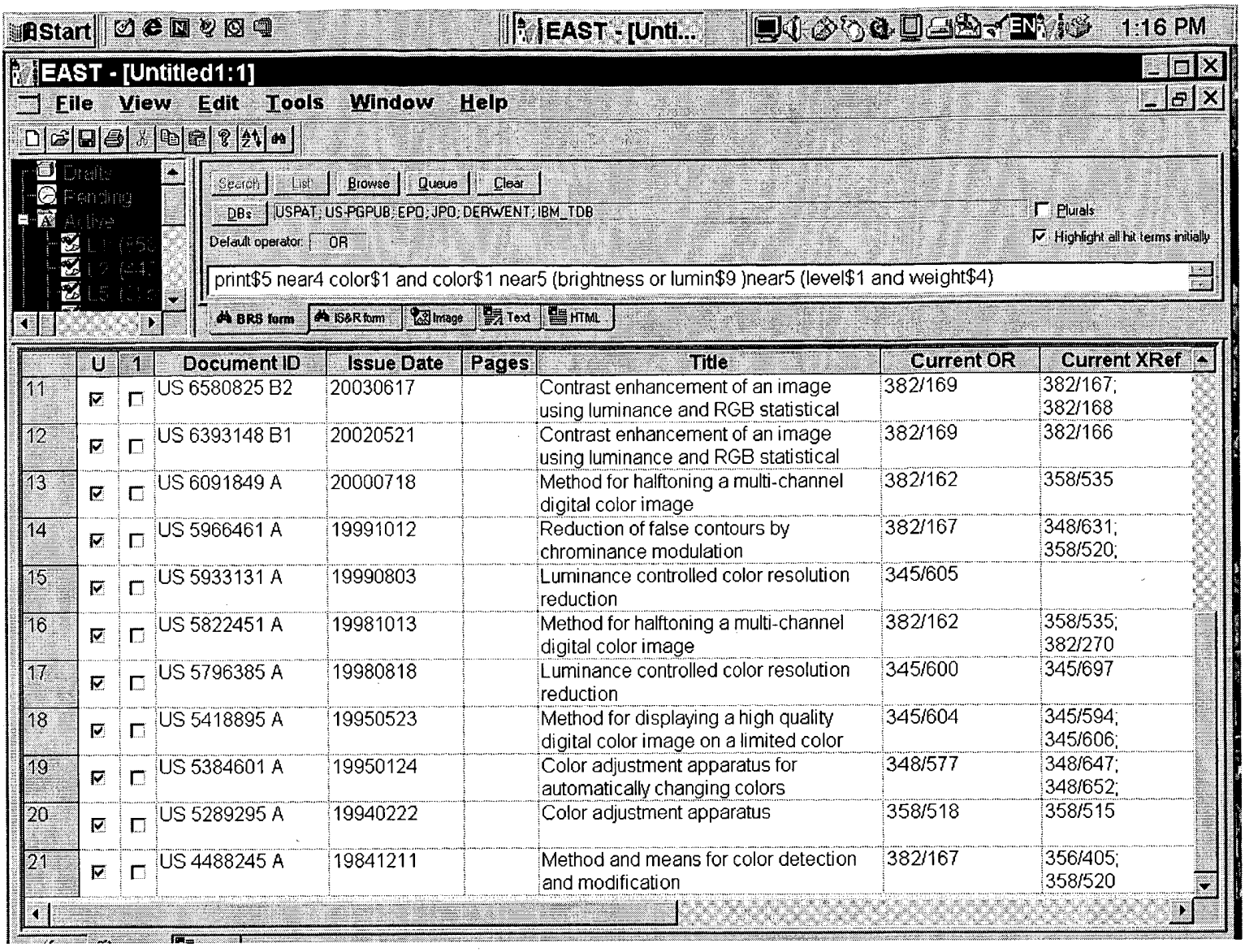
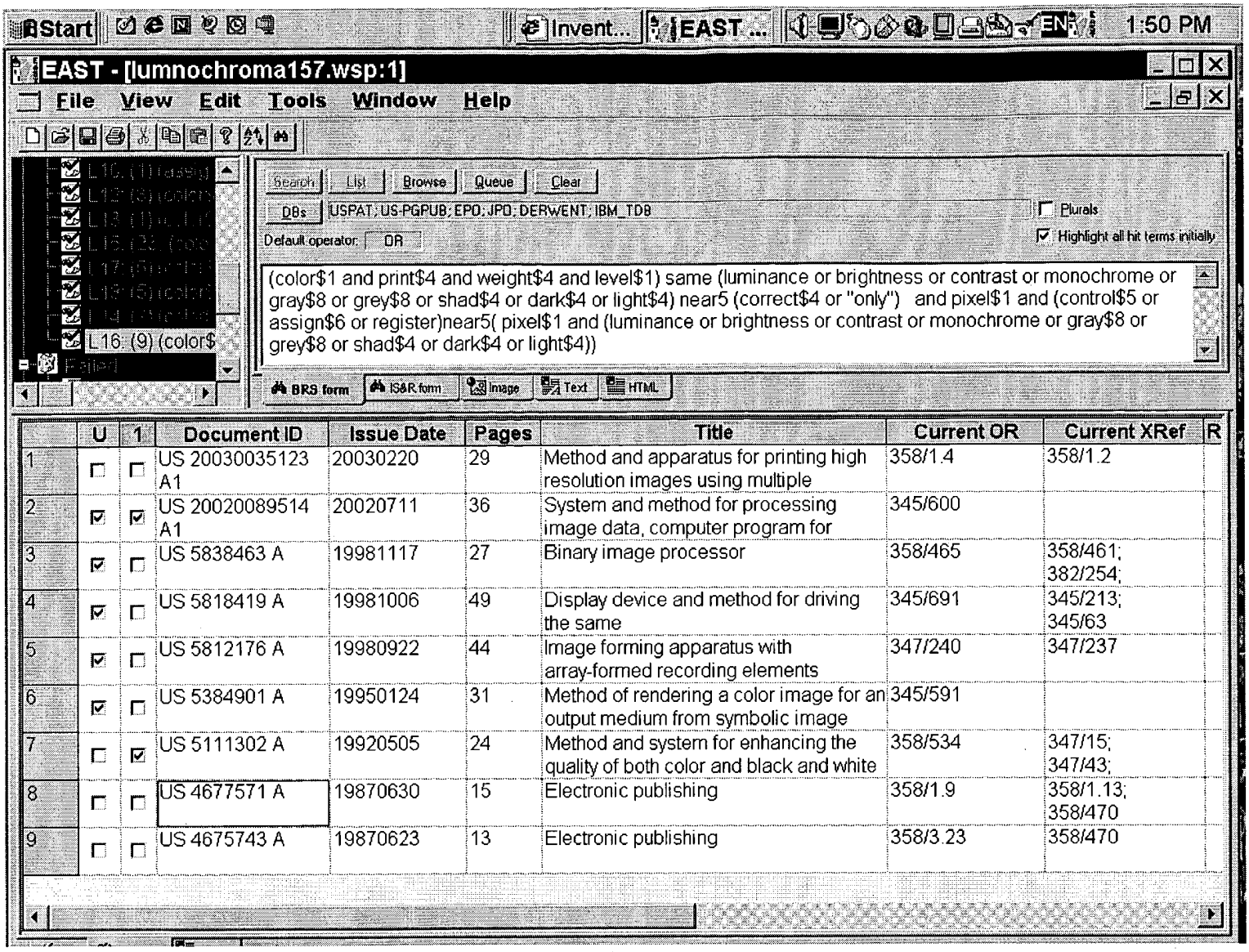
1	☑	☐	US 20030038953 A1	20030227	10	Color smooth error diffusion	358/1.9	358/3.03; 358/518;
2	☑	☐	US 20020168085 A1	20021114	19	Hiding information out-of-phase in color channels	382/100	
3	☑	☐	US 20020164052 A1	20021107	19	Enhancing embedding of out-of-phase signals	382/100	
4	☑	☐	US 20020164051 A1	20021107	19	Detecting information hidden out-of-phase in color channels	382/100	
5	☑	☐	US 20020160290 A1	20021031		Toner for electrostatic image developement and image forming	430/108.1	430/109.2; 430/111.4
6	☑	☐	US 20020126873 A1	20020912	9	Embedding digital watermarks in spot colors	382/100	
7	☑	☐	US 20020089514 A1	20020711	36	System and method for processing image data, computer program for	345/600	
8	☑	☐	US 20020081022 A1	20020627		Contrast enhancement of an image using luminance and RGB statistical	382/162	
9	☑	☐	US 6763124 B2	20040713	9	Embedding digital watermarks in spot colors	382/100	382/162
10	☑	☐	US 6753978 B1	20040622		Higher order error diffusion of digital halftoning	358/3.04	358/3.05
11	☑	☐	US 6580825 B2	20030617		Contrast enhancement of an image using luminance and RGB statistical	382/169	382/167; 382/168



	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current XRef
11	☑	☐	US 6580825 B2	20030617		Contrast enhancement of an image using luminance and RGB statistical	382/169	382/167; 382/168
12	☑	☐	US 6393148 B1	20020521		Contrast enhancement of an image using luminance and RGB statistical	382/169	382/166
13	☑	☐	US 6091849 A	20000718		Method for halftoning a multi-channel digital color image	382/162	358/535
14	☑	☐	US 5966461 A	19991012		Reduction of false contours by chrominance modulation	382/167	348/631; 358/520;
15	☑	☐	US 5933131 A	19990803		Luminance controlled color resolution reduction	345/605	
16	☑	☐	US 5822451 A	19981013		Method for halftoning a multi-channel digital color image	382/162	358/535; 382/270
17	☑	☐	US 5796385 A	19980818		Luminance controlled color resolution reduction	345/600	345/697
18	☑	☐	US 5418895 A	19950523		Method for displaying a high quality digital color image on a limited color	345/604	345/594; 345/606;
19	☑	☐	US 5384601 A	19950124		Color adjustment apparatus for automatically changing colors	348/577	348/647; 348/652;
20	☑	☐	US 5289295 A	19940222		Color adjustment apparatus	358/518	358/515
21	☑	☐	US 4488245 A	19841211		Method and means for color detection and modification	382/167	356/405; 358/520



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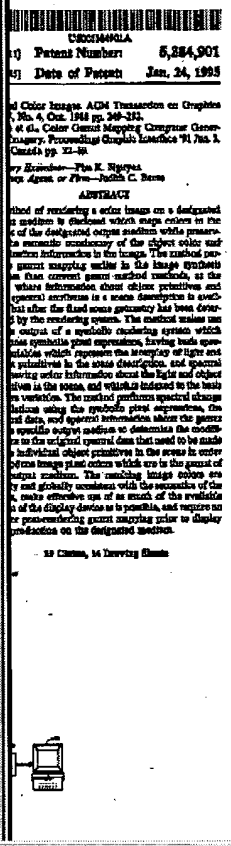
1	☐	☐	US 20030035123 A1	20030220	29	Method and apparatus for printing high resolution images using multiple	358/1.4	358/1.2	
2	☑	☑	US 20020089514 A1	20020711	36	System and method for processing image data, computer program for	345/600		
3	☑	☐	US 5838463 A	19981117	27	Binary image processor	358/465	358/461; 382/254;	
4	☑	☐	US 5818419 A	19981006	49	Display device and method for driving the same	345/691	345/213; 345/63	
5	☑	☐	US 5812176 A	19980922	44	Image forming apparatus with array-formed recording elements	347/240	347/237	
6	☑	☐	US 5384901 A	19950124	31	Method of rendering a color image for an output medium from symbolic image	345/591		
7	☐	☑	US 5111302 A	19920505	24	Method and system for enhancing the quality of both color and black and white	358/534	347/15; 347/43;	
8	☐	☐	US 4677571 A	19870630	15	Electronic publishing	358/1.9	358/1.13; 358/470	
9	☐	☐	US 4675743 A	19870623	13	Electronic publishing	358/3.23	358/470	

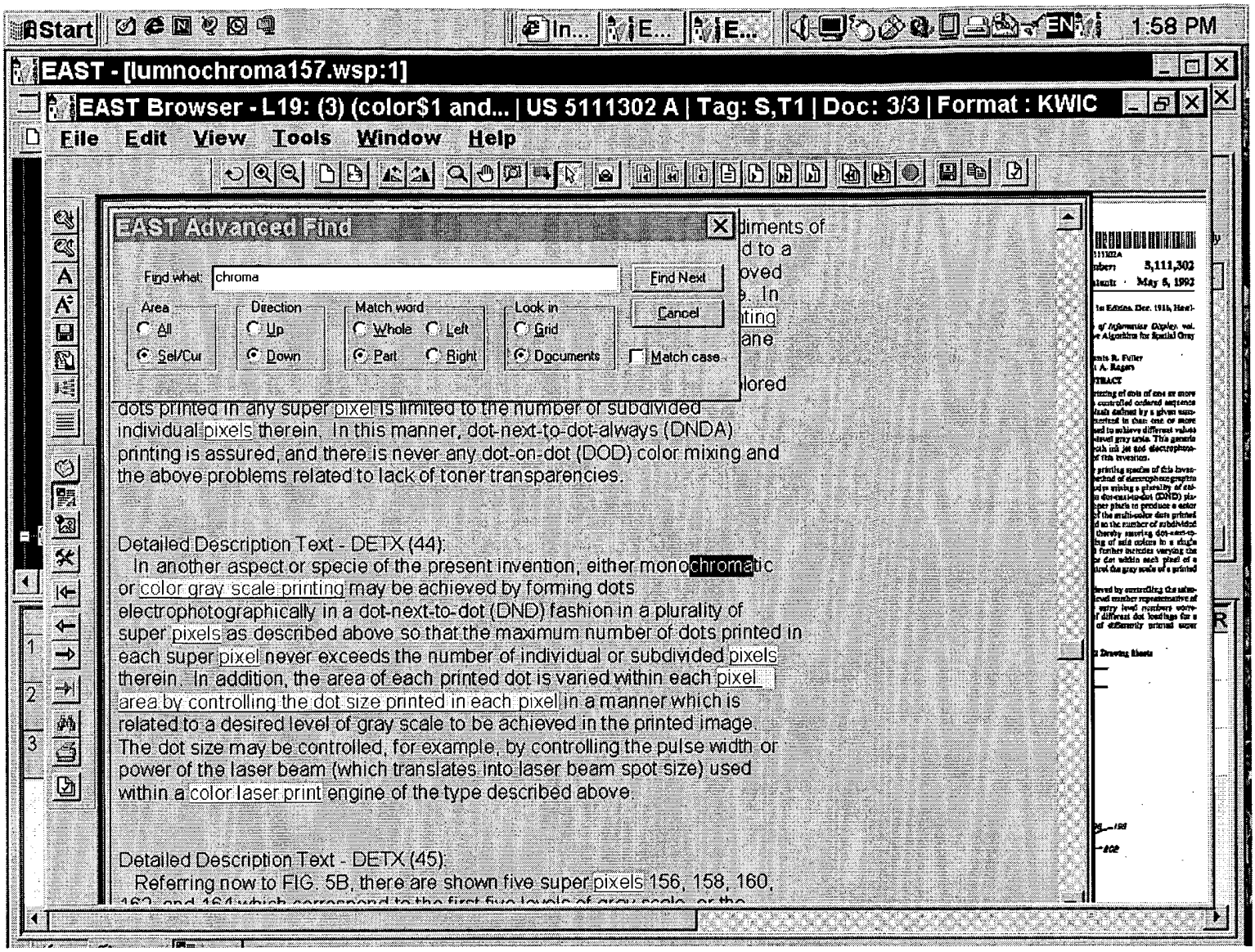
Brief Summary Text - BSTX (8):

The shaded rendering process, in box 30, takes the transformed, clipped primitives for the objects in the selected view of the scene, simulates the illumination on and in the scene, according to a physically-based model, typically an approximation to the physics of light in the scene, in order to determine a pixel color for every pixel of every primitive in the scene, and produces the image pixels and pixel colors needed to display the scene. Shading attempts to simulate how light in the scene behaves at the surfaces of the objects in the scene. "Ray tracing", generally defined as an image synthesis technique using geometrical optics and rays to recursively evaluate shading and visibility, and "radiosity", generally defined as an image synthesis technique which balances the distribution of light energy in an environment, are two well known shaded rendering methods for image synthesis. Steps in a shaded rendering process typically include first determining which objects (or surfaces of objects) in the scene are seen by the observer from a selected scene viewing position, determining the light arriving at each point on each visible object surface in the scene, simulating the propagation of that light in the scene for that point, and assigning a color value to an image pixel as a function of the light reflected and transmitted at that point by the light sources and other objects in the scene. Once shaded rendering process 30 is completed, the image to be displayed is represented as a collection of individual image pixels, each with an associated pixel color. The image pixels, shown in memory device 32, are typically stored in a frame buffer from which they may be processed, via arrow 34 to box 48, by display routines appropriate for the specific device on which the image is to be generated, for display or reproduction on an output medium 49.

Brief Summary Text - BSTX (9):

All of the colors physically producible on a particular color output medium





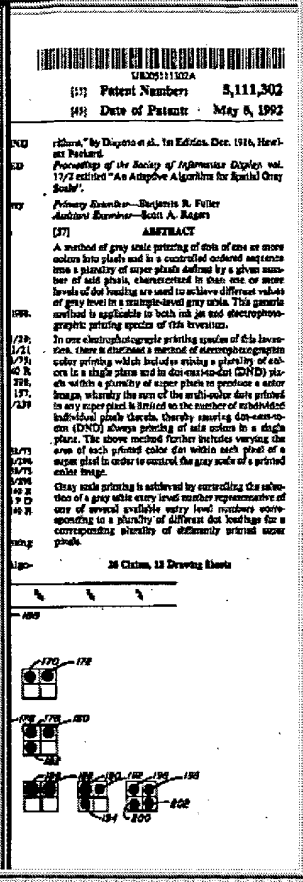
The scheme of dots assignment to a 2 times 2 super pixel is to assign the dots counts in the sequence of their highest gray level plane from black, cyan, magenta to yellow. This scheme is then repeated as described in the example given above for medium and low gray level.

Detailed Description Text - DETX (33):

Various modifications may be made in the above described embodiment without departing from the scope of this invention. As an example, a different dye loading ratio of 8:3:1 may be used with a 32 level gray scale and with a 2 times 2 super pixel in accordance with the above teachings. In addition, this invention may be used with different size drop volumes or with multi-drop formatting where the print area is only a single pixel. However, in the multi-drop printing process, higher print frequencies are required as compared to those required by the present invention. Also, the present invention may be used with other types of ink jet printers such as thermal transfer or piezoelectric ink jet printers.

Detailed Description Text - DETX (35):

In priority of selecting the highest drop count from the (C, Y, M, K) colors, there may be an advantage to modify this set to only (C, M, Y) colors only and to leave the black or K plane of information intact. This is because the black plane contains most of the resolution information, and this is especially true for the case of 100% UCR where the error diffusion of the color plane will only slightly alter the chromaticity of the printed image. Additionally, the visual perception is more sensitive to resolution than it is to color information. As a practical matter, the yellow gray scale is of least importance, so from both a hardware and a software standpoint, a single dye level of yellow would be acceptable.



US005111302A

[11] Patent Number: 5,111,302

[45] Date of Patent: May 5, 1992

[57] ABSTRACT

A method of gray scale printing of dots of one or more colors into pixels and in a controlled ordered sequence into a plurality of super pixels defined by a given number of said pixels, characterized in that one or more levels of dot loading are used to achieve different values of gray level in a multiple-level gray area. This generic method is applicable to both ink jet and electrophotographic printing species of this invention.

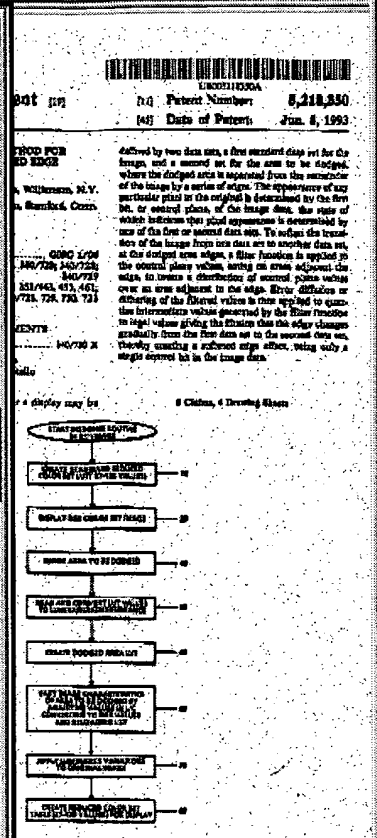
In one electrophotographic printing species of this invention, there is disclosed a method of electrophotographic color printing which includes giving a plurality of colors in a single plane and in dot-on-not-dot (DND) pixels within a plurality of super pixels to produce a color image, whereby the sum of the multi-color dots printed in any super pixel is limited to the number of subdivided individual pixels therein, thereby causing dot-on-not-dot (DND) always printing of said colors in a single plane. The above method further includes varying the area of each printed color dot within each pixel of a super pixel in order to control the gray scale of a printed color image.

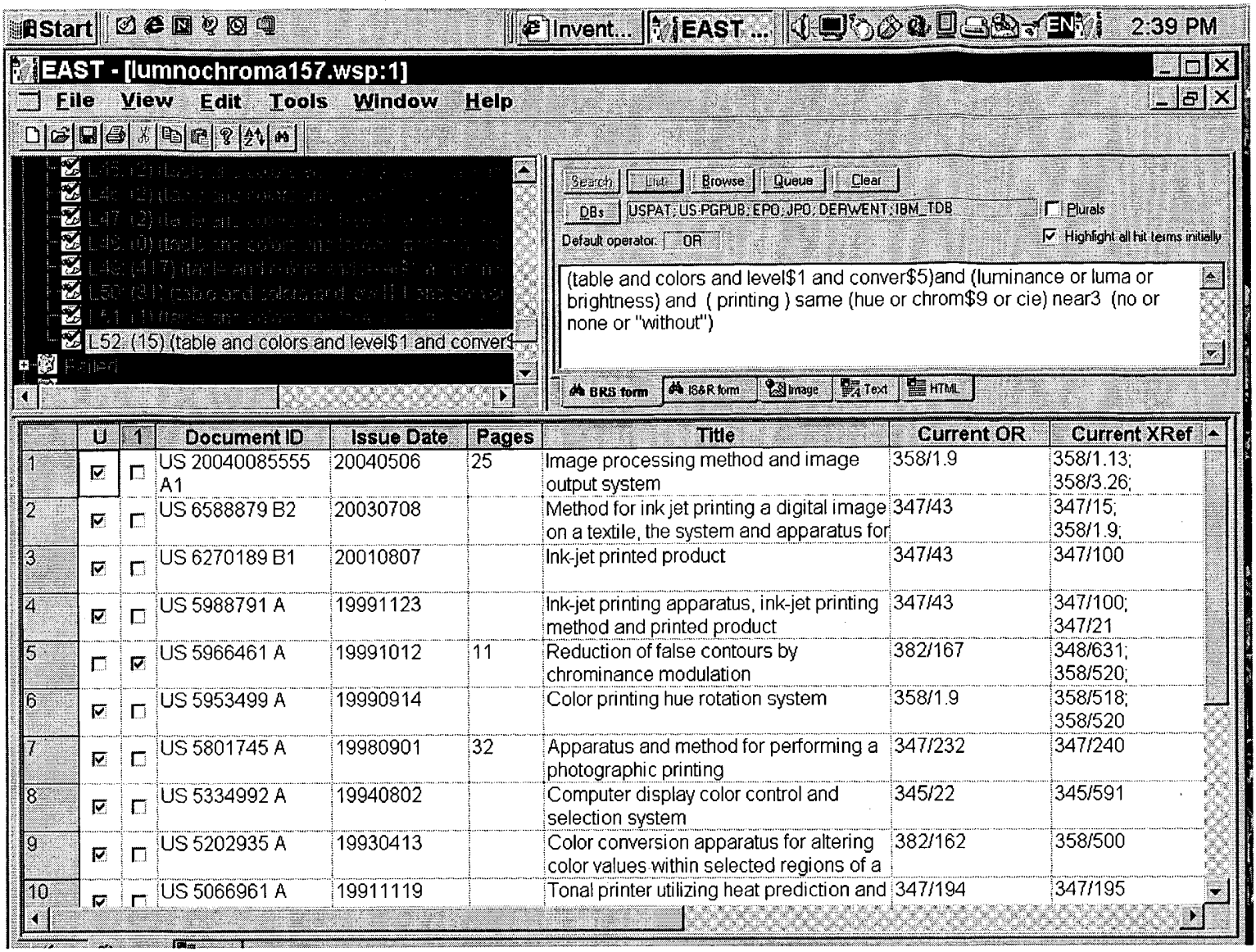
Gray scale printing is achieved by controlling the selection of a gray white entry level number representative of one of several available entry level numbers corresponding to a plurality of different dot loadings for a corresponding plurality of differently printed super pixels.

26 Claims, 12 Drawing Sheets

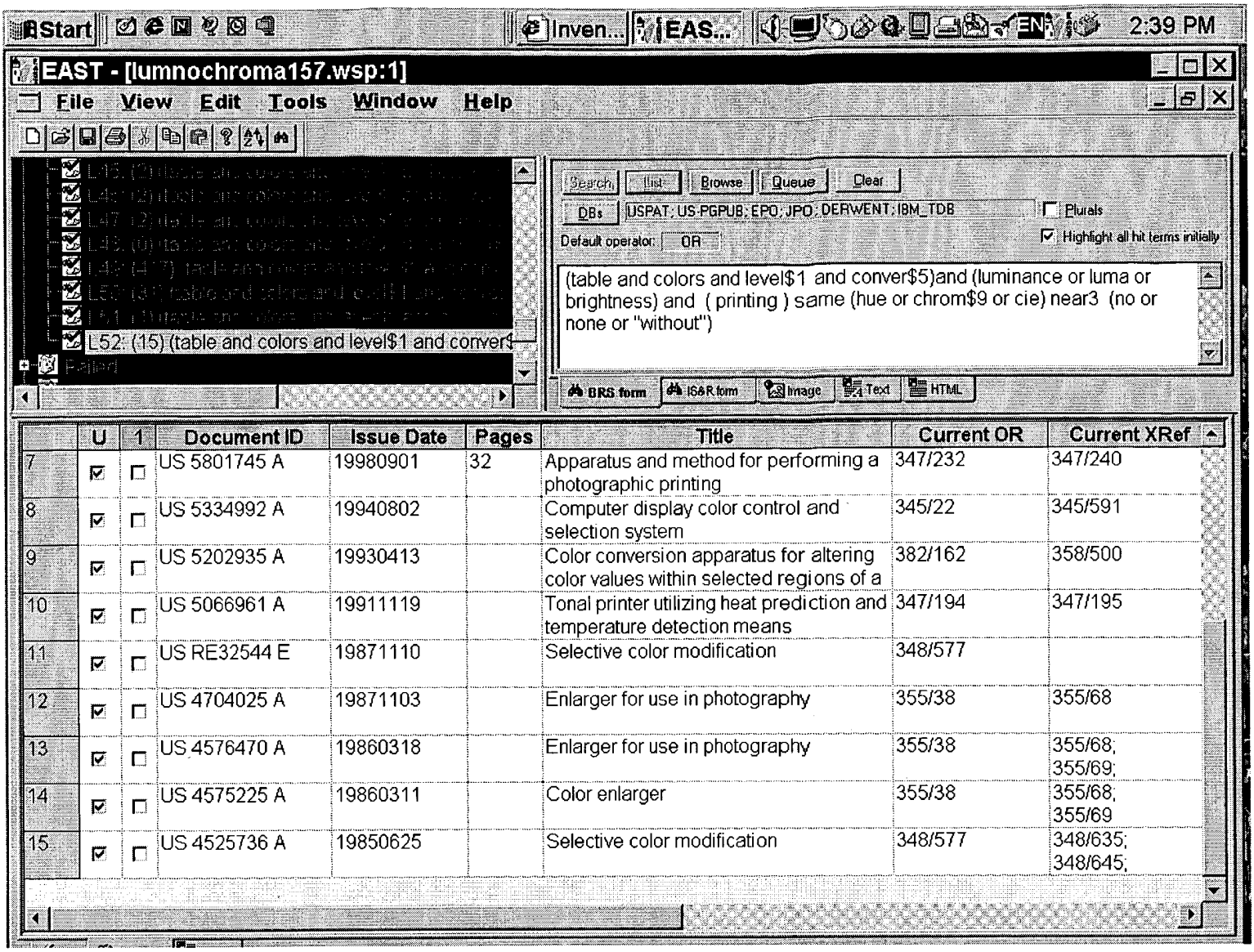
Detailed Description Text - DETX (5):

With reference again to FIG. 1, at step 40, within the image, an area to be dodged is defined, through standard area definition techniques. This may be accomplished with a manual outlining arrangement, where the area is outlined with appropriate mouse software, or object/edge finding software, or any other area selection technique. The area to be dodged may be either inside or outside the area defined. When the process of dodging is selected, at step 45, a new look up table is created having perhaps similar chrominance values, but different luminance values representing the brightness of the image. Again, with reference to U.S. patent application Ser. No. 07/517,895, by James E. Bollman et al., entitled "Color Editing With Simple Encoded Images", the manipulation of colors in the defined portion of the original image would be accomplished in the reduced color set representation of the original image, through the user interface I of FIG. 3, which shows a window arrangement where, below the image display space 41, sliders 42, 43, 44 and 46, respectively representing hue, saturation, black and white contrast, and brightness, are selectable by movement of indicators 49 with a mouse or other data entry device. Hue and saturation represent chrominance values, and variations of hue and saturation vary the actual color of the image. Black and white contrast and brightness represent luminance values, and variations of black and white contrast and brightness represent variations in the intensity of the image. While dodging refers to black and white contrast and brightness variation in photographic sciences, in the context of the present invention, dodging refers to variation of image appearance, coupled with softened edges, and may be used with hue, saturation, black and white contrast or brightness variations, or combinations thereof. Other variations are also within the scope of the invention. With reference to FIGS. 1 and 2, at step 50 in the dodging process, the image appearance characteristics, of the defined area, to be dodged are varied, by adjusting the image data values in luminance/chrominance space. Variations to the image look up table in the luminance/chrominance color space





	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current XRef
1	☑	☐	US 20040085555 A1	20040506	25	Image processing method and image output system	358/1.9	358/1.13; 358/3.26;
2	☑	☐	US 6588879 B2	20030708		Method for ink jet printing a digital image on a textile, the system and apparatus for	347/43	347/15; 358/1.9;
3	☑	☐	US 6270189 B1	20010807		Ink-jet printed product	347/43	347/100
4	☑	☐	US 5988791 A	19991123		Ink-jet printing apparatus, ink-jet printing method and printed product	347/43	347/100; 347/21
5	☐	☑	US 5966461 A	19991012	11	Reduction of false contours by chrominance modulation	382/167	348/631; 358/520;
6	☑	☐	US 5953499 A	19990914		Color printing hue rotation system	358/1.9	358/518; 358/520
7	☑	☐	US 5801745 A	19980901	32	Apparatus and method for performing a photographic printing	347/232	347/240
8	☑	☐	US 5334992 A	19940802		Computer display color control and selection system	345/22	345/591
9	☑	☐	US 5202935 A	19930413		Color conversion apparatus for altering color values within selected regions of a	382/162	358/500
10	☑	☐	US 5066961 A	19911119		Tonal printer utilizing heat prediction and	347/194	347/195



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10	☑	☐	US 5066961 A	19911119		Tonal printer utilizing heat prediction and temperature detection means	347/194	347/195
11	☑	☐	US RE32544 E	19871110		Selective color modification	348/577	
12	☑	☐	US 4704025 A	19871103		Enlarger for use in photography	355/38	355/68
13	☑	☐	US 4576470 A	19860318		Enlarger for use in photography	355/38	355/68; 355/69;
14	☑	☐	US 4575225 A	19860311		Color enlarger	355/38	355/68; 355/69
15	☑	☐	US 4525736 A	19850625		Selective color modification	348/577	348/635; 348/645;